

FIG. 1

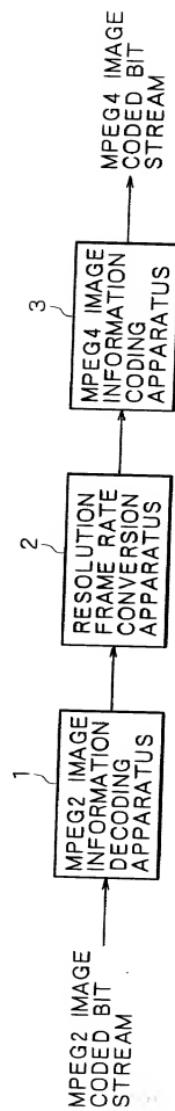


FIG. 2

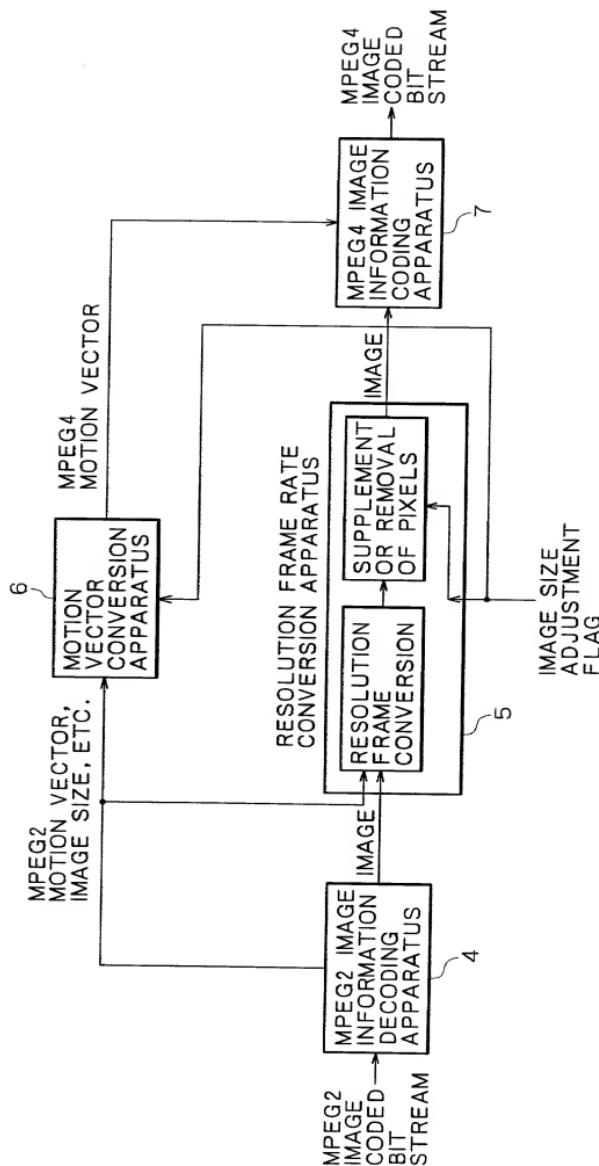


FIG. 3A

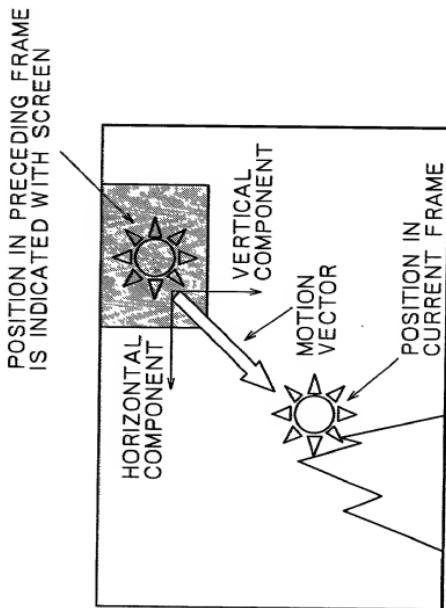
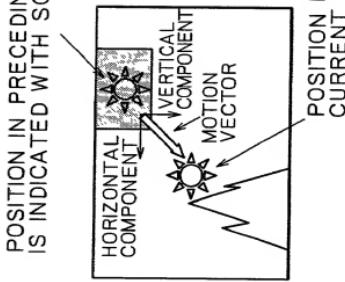


FIG. 3B



POSITION IN PRECEDING FRAME
IS INDICATED WITH SCREEN

FIG. 4

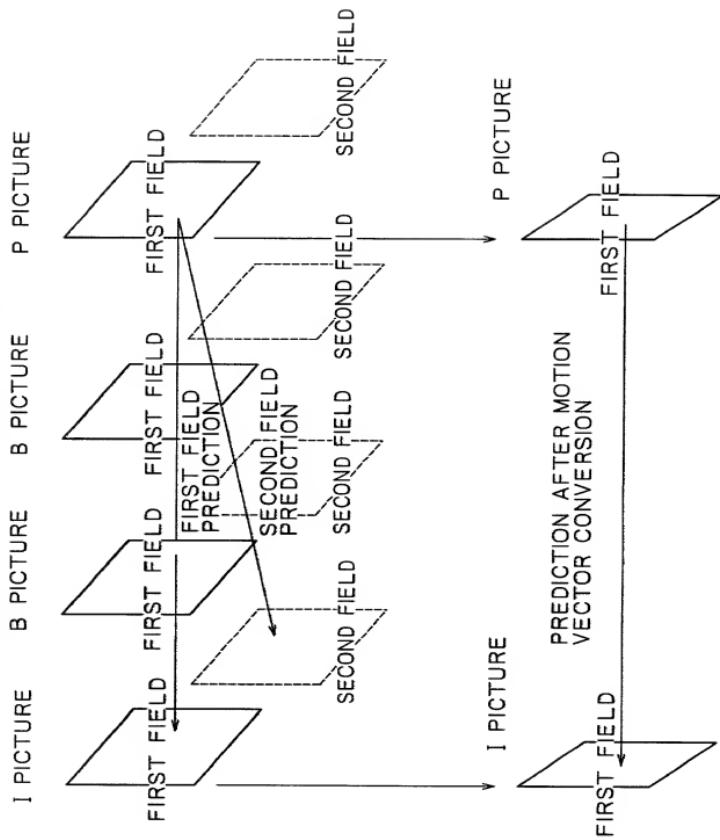


FIG. 5

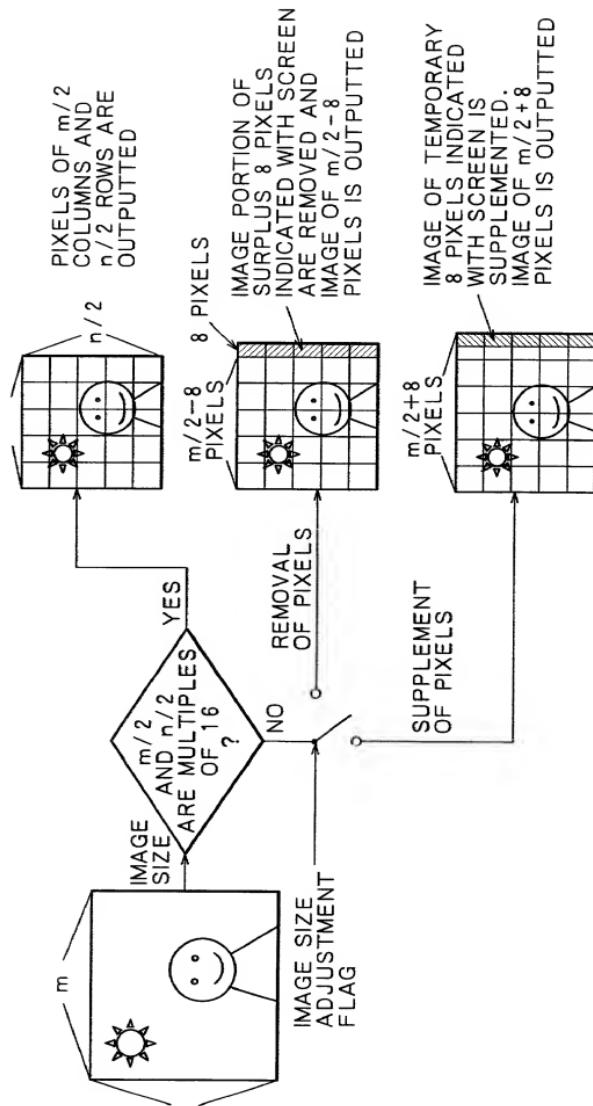


FIG. 6A

IMAGE DECODED BY MPEG
DECODING SYSTEM

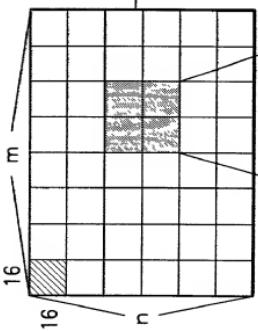
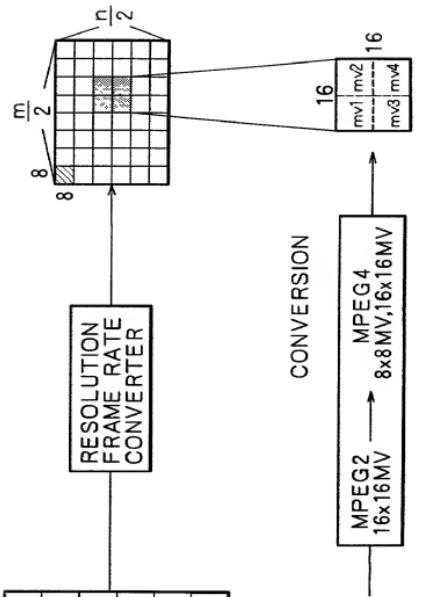


IMAGE CODED BY MPEG4
CODING SYSTEM



BEFORE RESOLUTION
CONVERSION

AFTER RESOLUTION
CONVERSION

FIG. 7

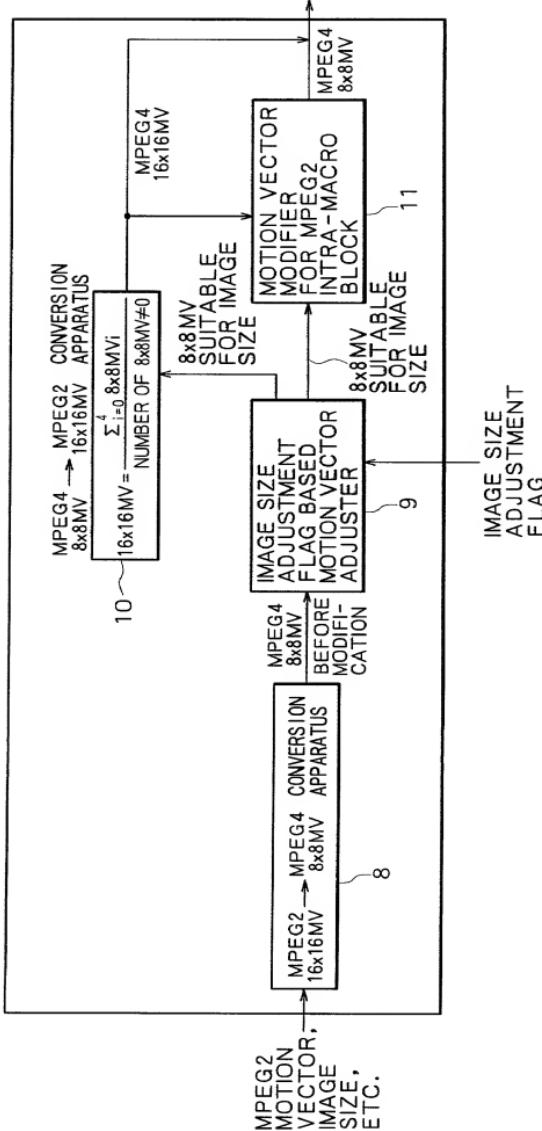


FIG. 8

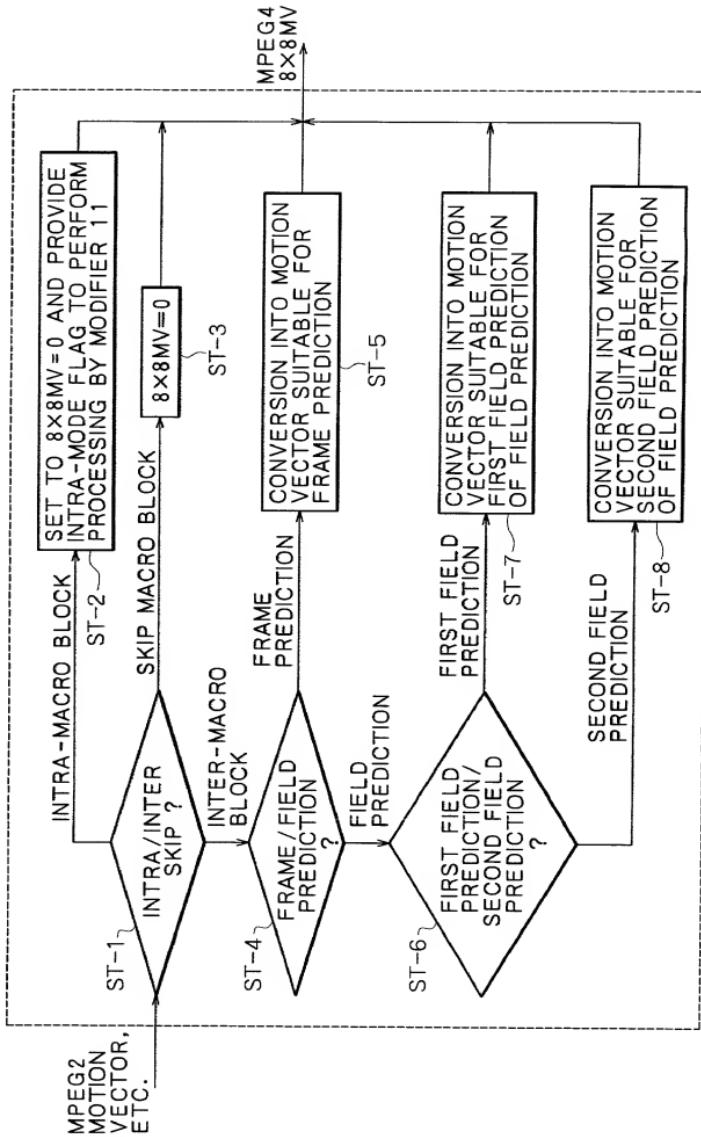


FIG. 9A

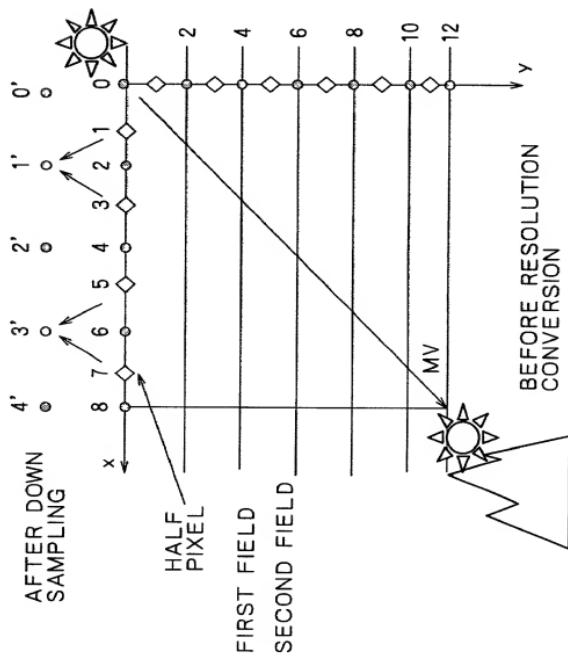


FIG. 9B

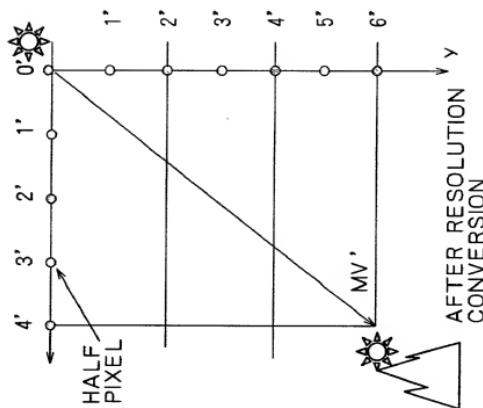


FIG. 10

REMAINDER WHEN MOTION VECTOR MV BEFORE CONVERSION IS DIVIDED BY 4	0	1	2	3
MOTION VECTOR AFTER CONVERSION	$[MV/2]$	$[MV/2] + 1$	$[MV/2]$	$[MV/2]$

$[MV/2]$ REPRESENTS INTEGER PART WHEN MV IS DIVIDED BY 2

FIG. 11A

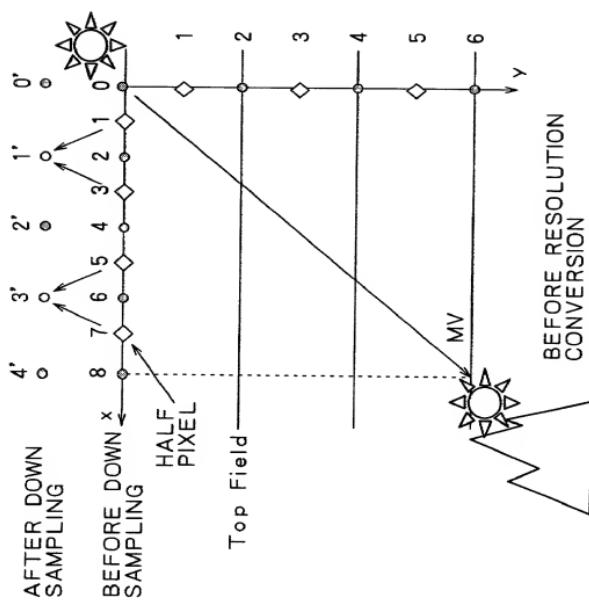
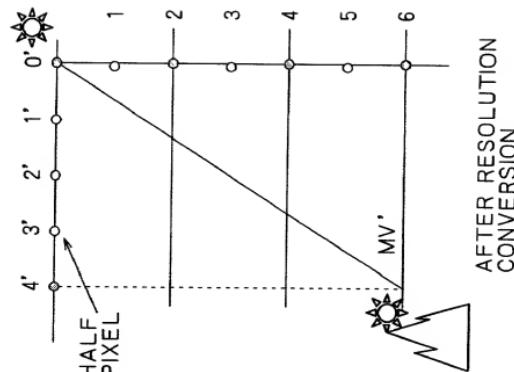
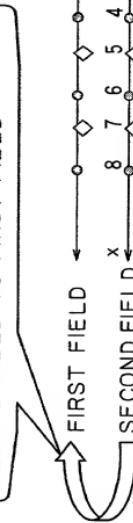


FIG. 11B



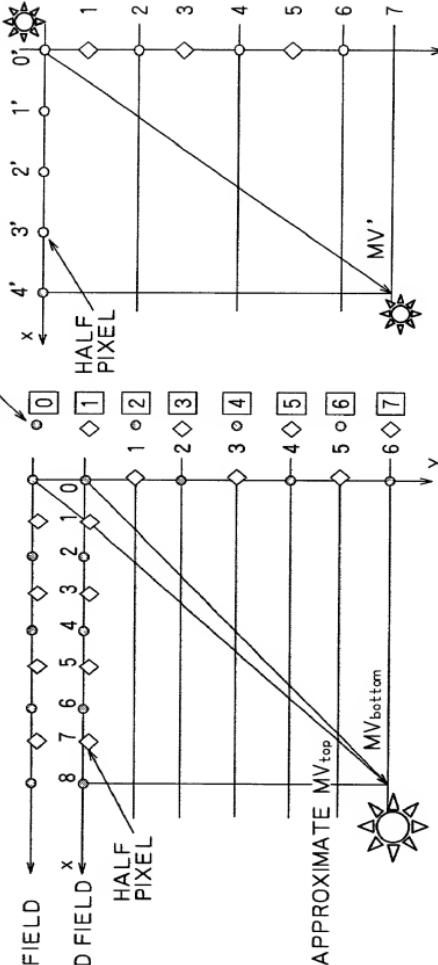
SINCE IMAGE ONLY OF EXTRACTED FIRST FIELD IS INPUTTED TO MPEG4 IMAGE CODING APPARATUS, FIRST FIELD IS USED AS REFERENCE IMAGE FOR MPEG4. THEREFORE, 1 IS ADDED TO VERTICAL COMPONENTS OF MOTION VECTORS UPON PREDICTION OF SECOND FIELD OF MPEG2 TO APPROXIMATE SECOND FIELD TO FIRST FIELD

FIG. 12A



VERTICAL COMPONENT
OF MOTION VECTOR
AFTER MODIFICATION

FIG. 12B



BEFORE RESOLUTION
CONVERSION

AFTER RESOLUTION
CONVERSION

FIG. 13

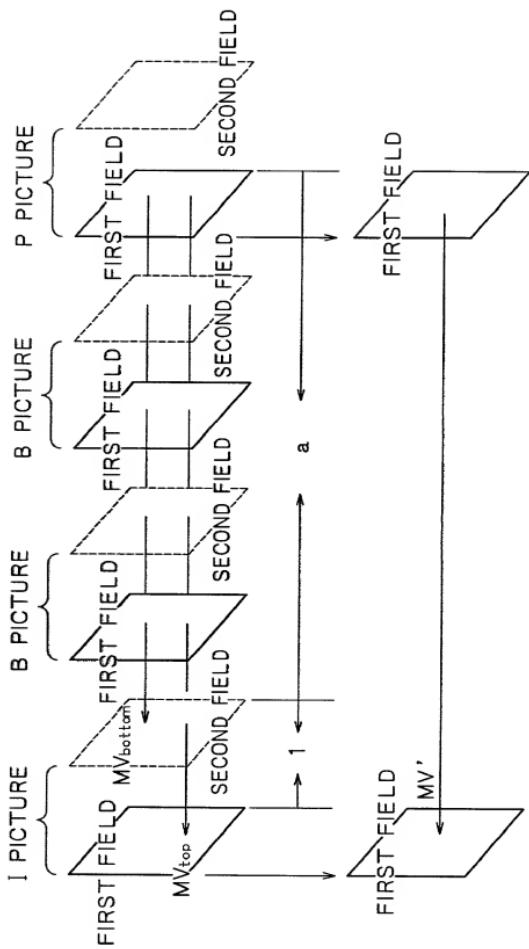


FIG. 14

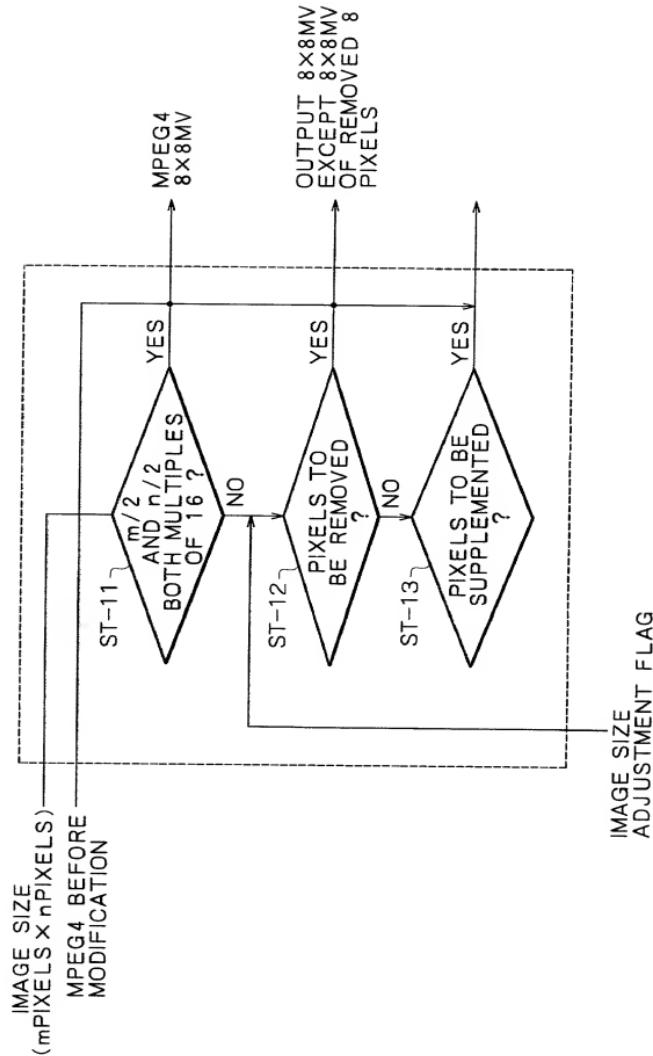


FIG. 15

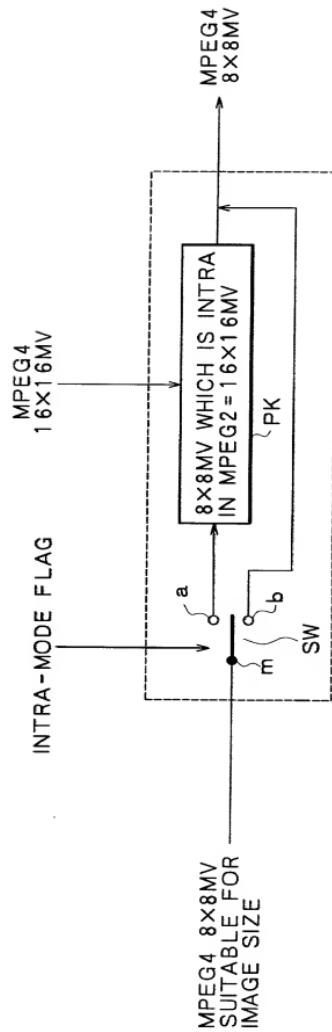


FIG. 16

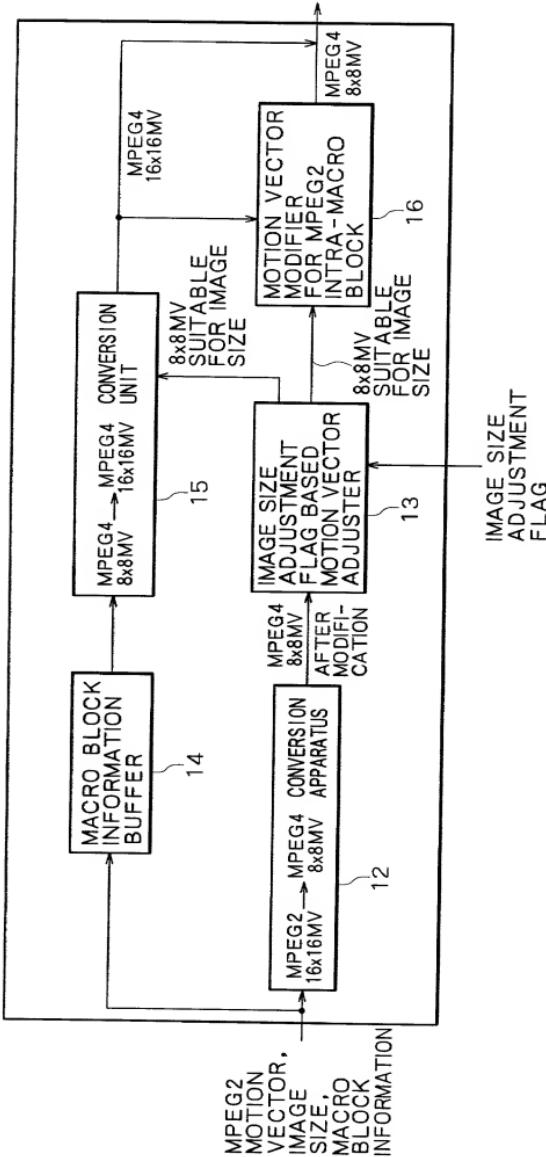


FIG. 17A

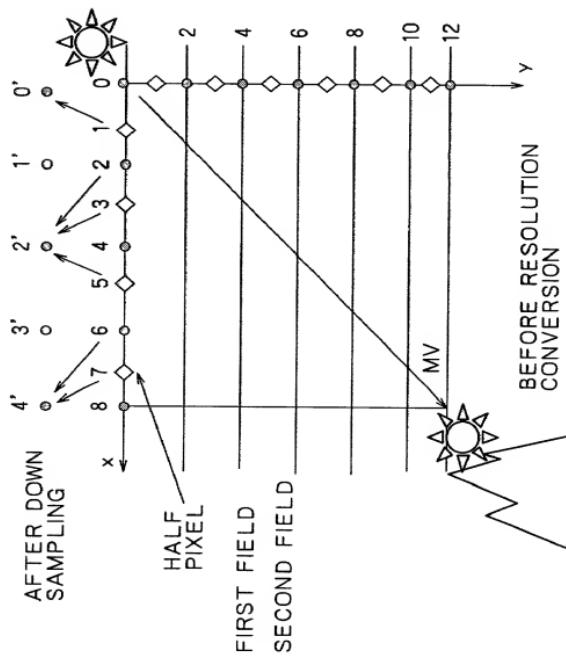


FIG. 17B

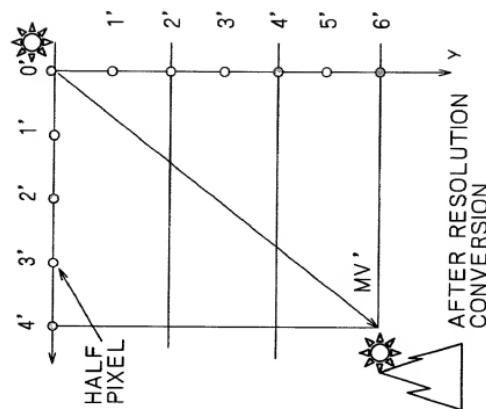


FIG. 18

REMAINDER WHEN MOTION VECTOR MV BEFORE CONVERSION IS DIVIDED BY 4	0	1	2	3
MOTION VECTOR AFTER CONVERSION	$[MV/2]$	$[MV/2]$	$[MV/2] + 1$	$[MV/2]$

$[MV/2]$ REPRESENTS INTEGER PART WHEN MV IS DIVIDED BY 2

FIG. 19A

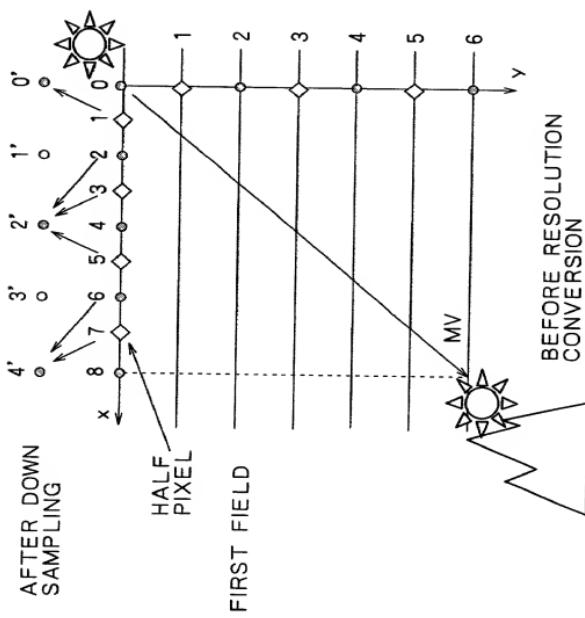
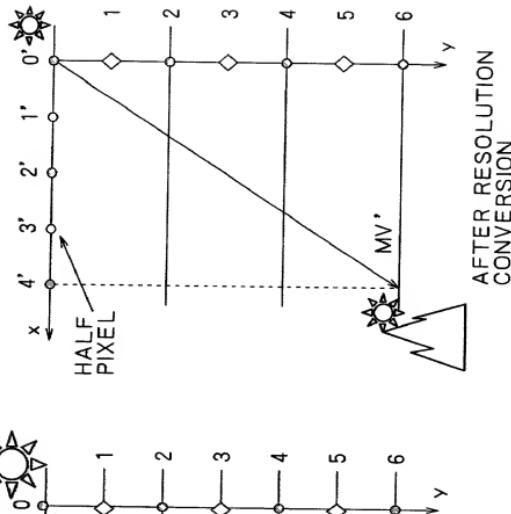


FIG. 19B



SINCE IMAGE ONLY OF EXTRACTED FIRST FIELD IS INPUTTED TO MPEG4 IMAGE CODING APPARATUS, FIRST FIELD IS USED AS REFERENCE IMAGE FOR MPEG4. THEREFORE, 1 IS ADDED TO VERTICAL COMPONENTS OF MOTION VECTORS UPON PREDICTION OF SECOND FIELD OF MPEG2 TO APPROXIMATE SECOND FIELD TO FIRST FIELD

FIG. 20A

VERTICAL COMPONENT
OF MOTION VECTOR
AFTER MODIFICATION

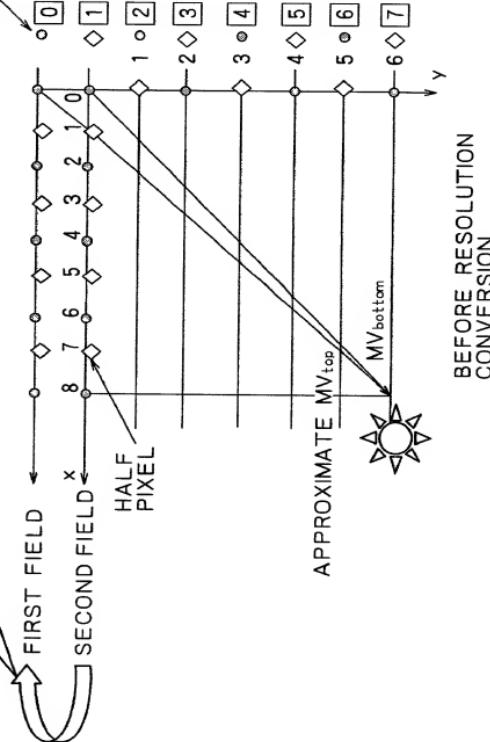
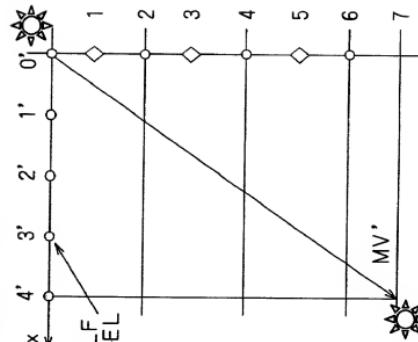


FIG. 20B



AFTER RESOLUTION
CONVERSION

BEFORE RESOLUTION
CONVERSION

FIG. 21

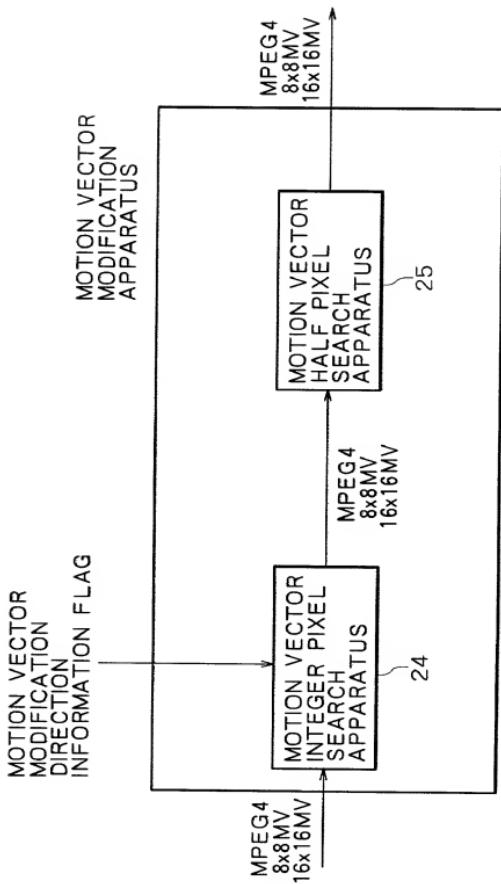
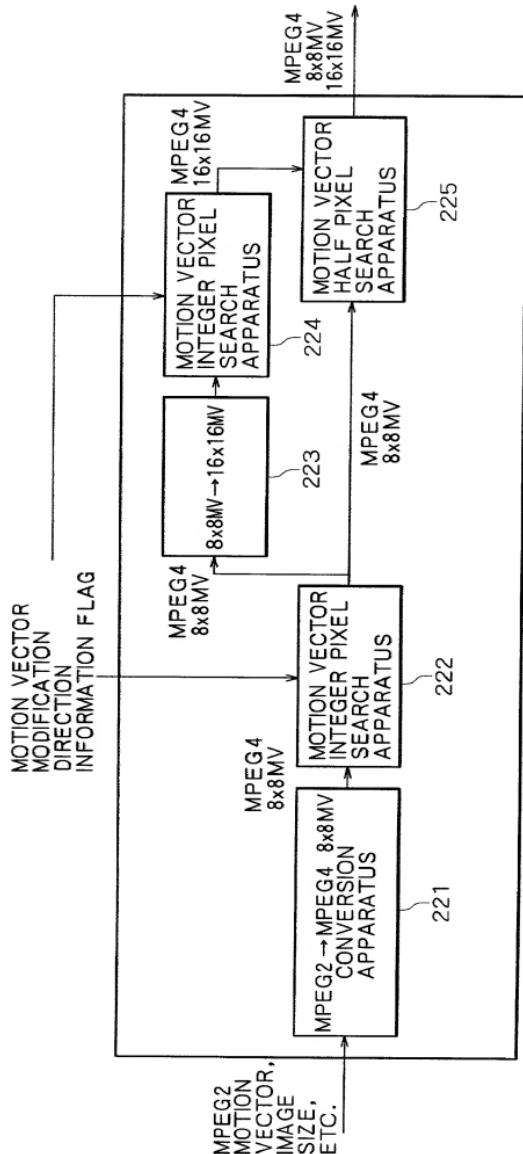


FIG. 22



MOTION VECTOR CONVERSION APPARATUS

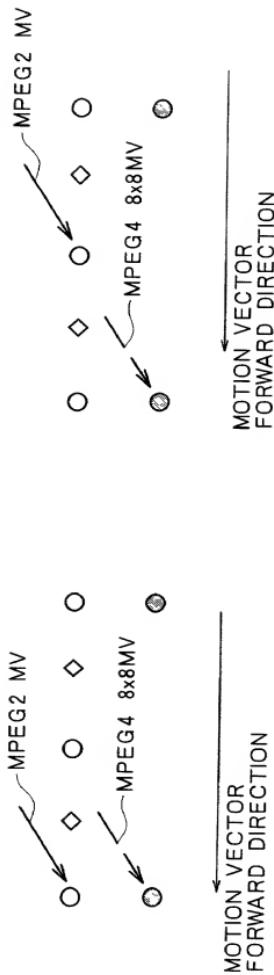
○ MPEG2 INTEGER PIXEL ○ MPEG4 INTEGER PIXEL
◊ MPEG2 HALF PIXEL

FIG. 23A

MODIFICATION FROM MPEG2
INTEGER PIXEL TO MPEG4

FIG. 23B

MODIFICATION FROM MPEG2 INTEGER
PIXEL TO MPEG4 INTEGER PIXEL
OF FORWARD DIRECTION



○ MPEG2 INTEGER PIXEL ◊ MPEG4 INTEGER PIXEL
 ◇ MPEG2 HALF PIXEL

FIG. 24A

MODIFICATION FROM MPEG2 INTEGER
PIXEL TO MPEG4 INTEGER PIXEL
VALUE OF FORWARD DIRECTION

FIG. 24B

MODIFICATION FROM MPEG2 INTEGER
PIXEL TO MPEG4 INTEGER PIXEL
VALUE OF REVERSE DIRECTION

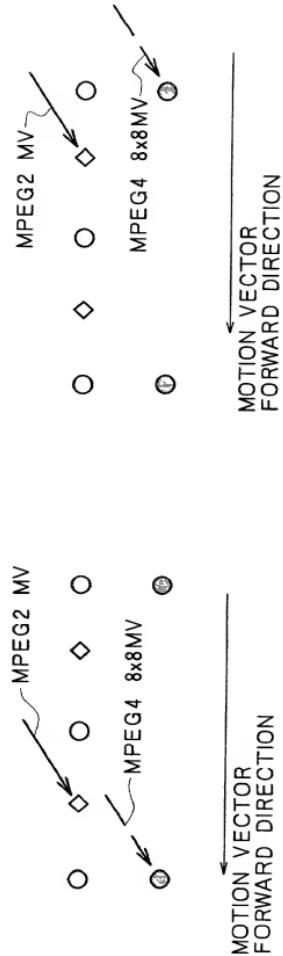


FIG. 25

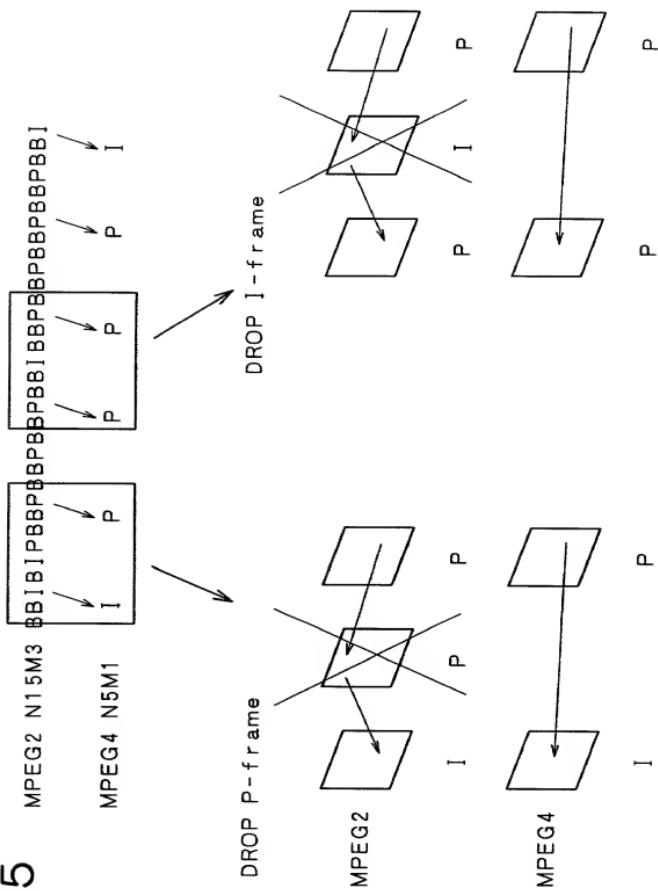


FIG. 26

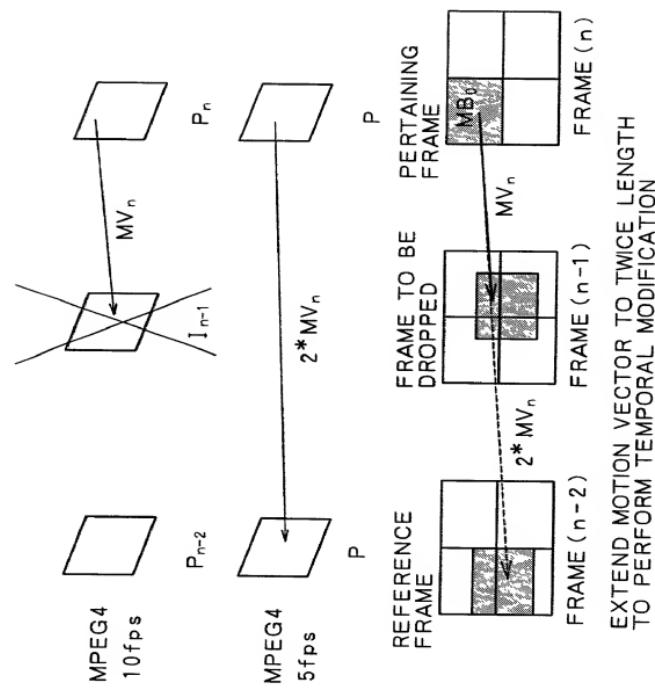


FIG. 27

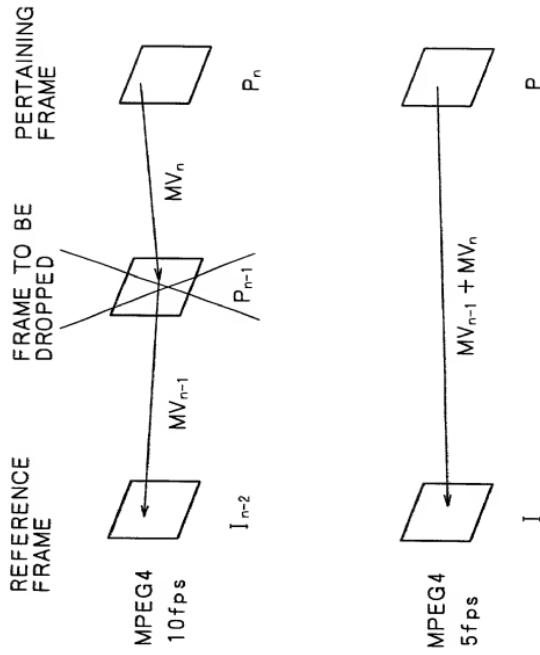


FIG. 28

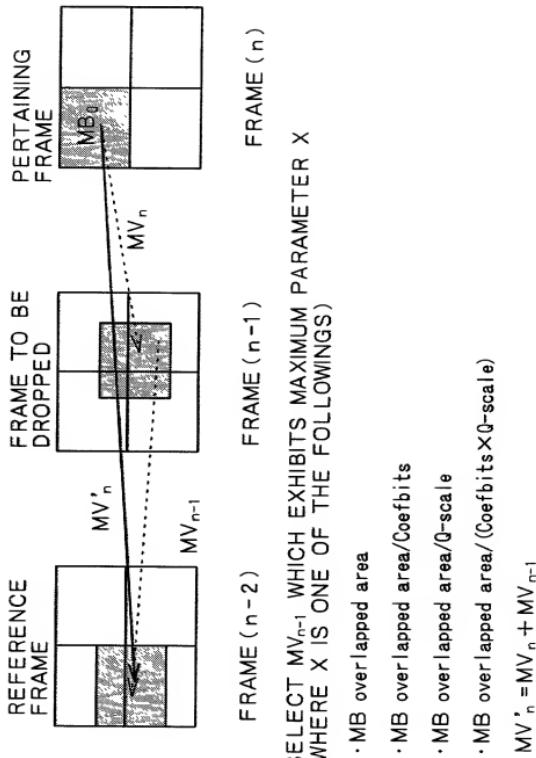
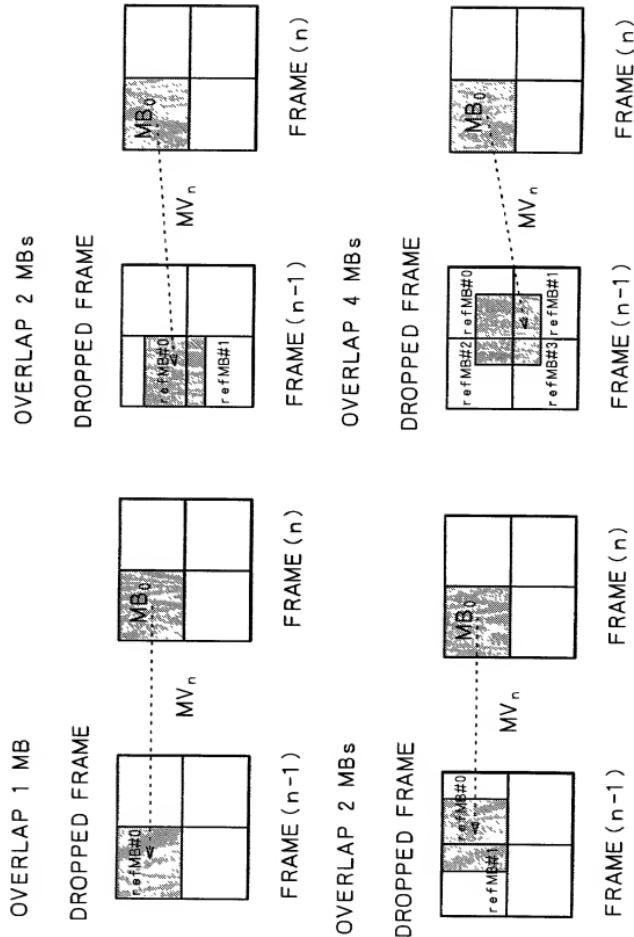


FIG. 29



OVERLAPPING MB (1, 2 OR 4MB)

FIG. 30

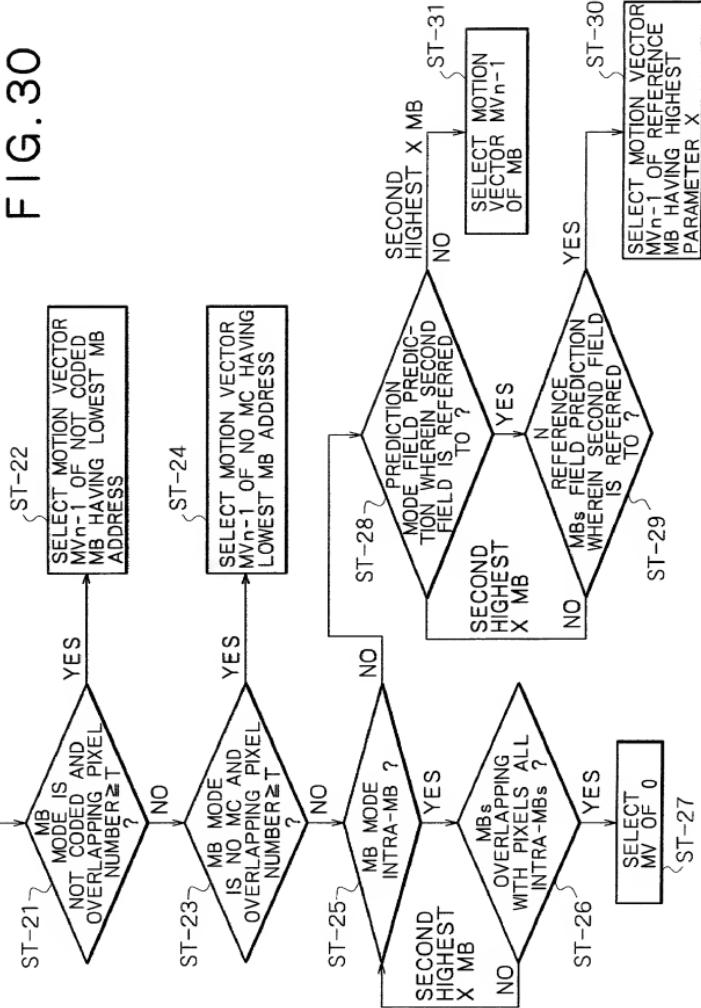


FIG. 31

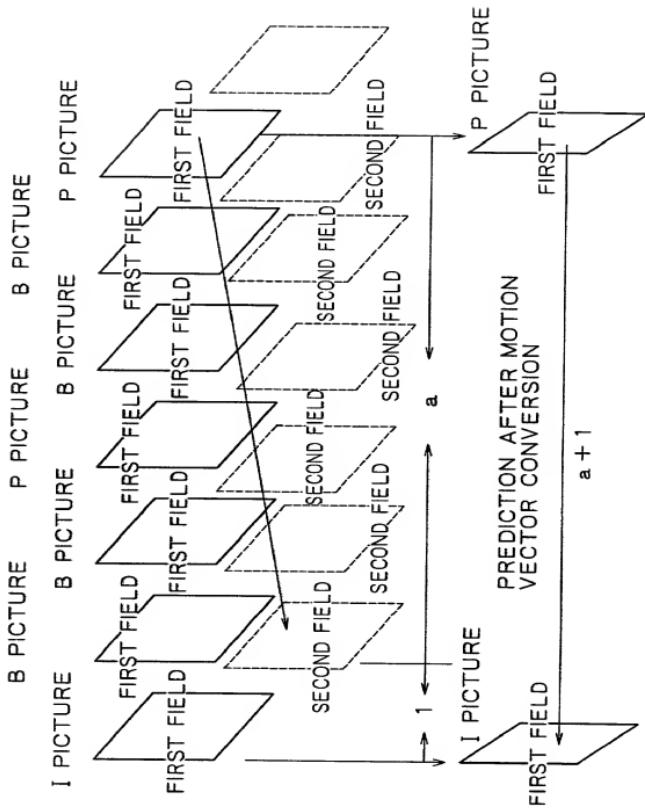


FIG. 32

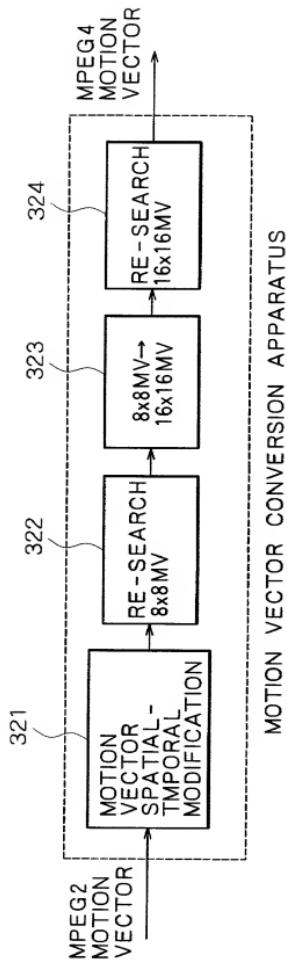
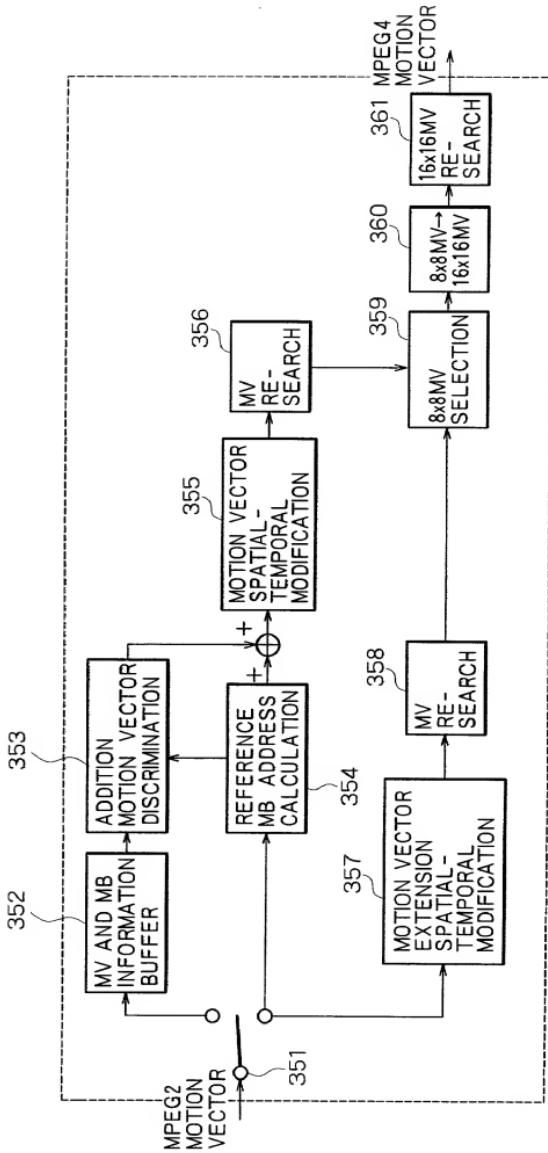
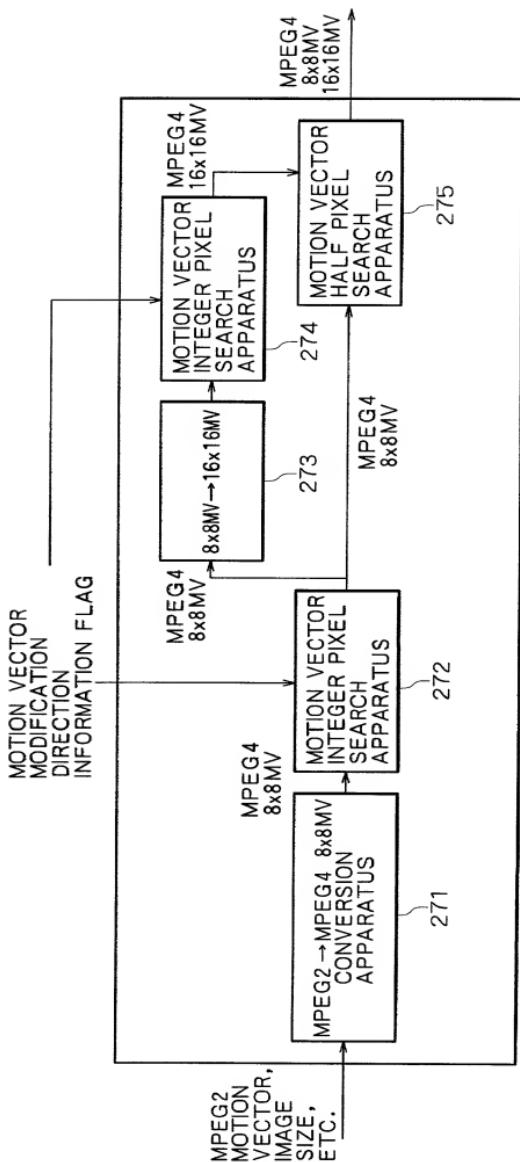


FIG. 33



MOTION VECTOR CONVERSION APPARATUS

FIG. 34



MOTION VECTOR CONVERSION APPARATUS

FIG. 35

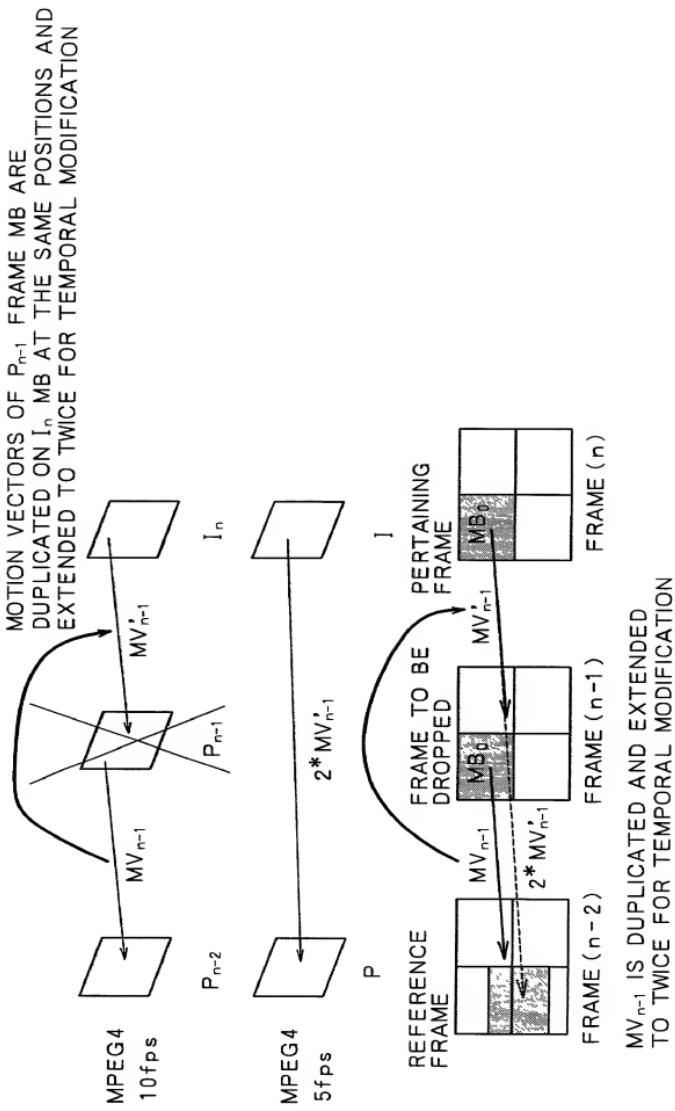


FIG. 36

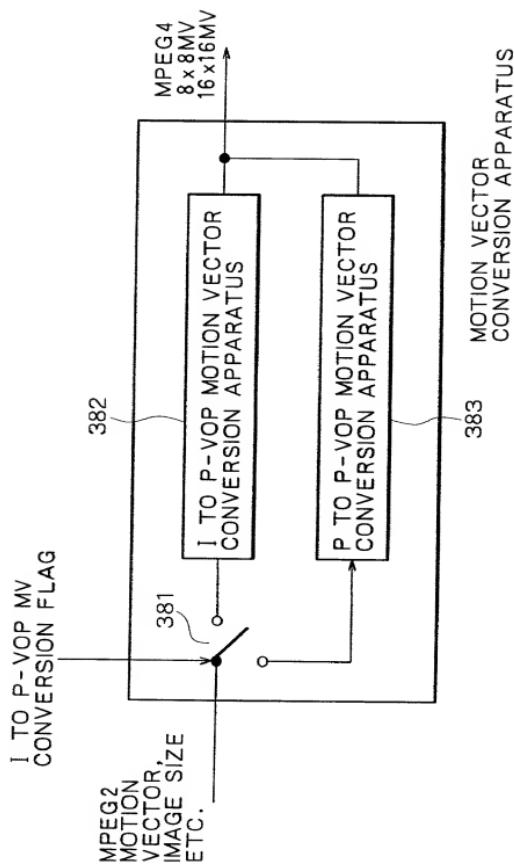
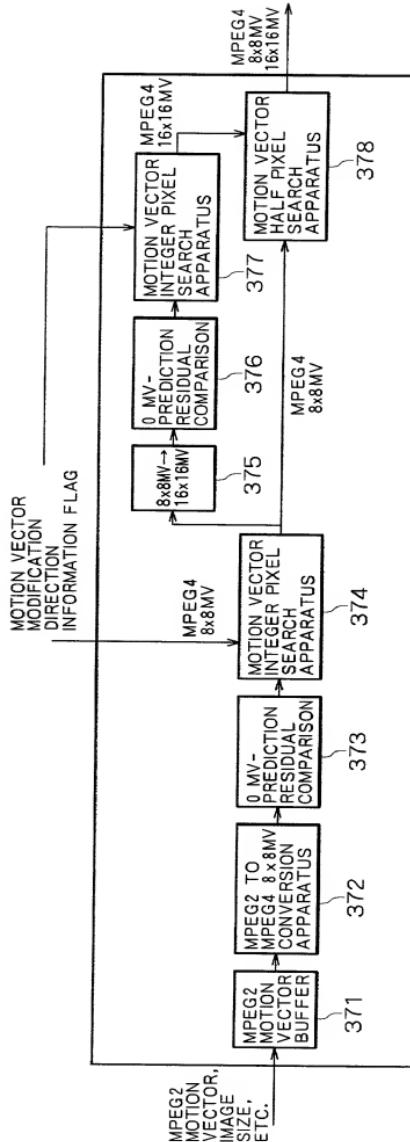


FIG. 37



I TO P MOTION VECTOR CONVERSION APPARATUS